The difference in the larval food habits of the two species will be noted, the one being a root- and stem-feeder, the other, according to Hamilton<sup>2</sup>, a leaf-roller.

## MIGRATION OF PYRAMEIS CARDUI

The 1924 annual migration of Pyrameis cardui in this region is beyond doubt the largest on record. The butterflies began to struggle across the border from Baja, California, about February 27, and soon became very abundant for seventy miles or more, or from coast to Colorado River. Today, March 15, the migration is about completed in Los Angeles County, the mass having crossed successfully the mountain range varying from 3.000 to 8,000 feet and getting into the Mohave and Ventura valleys. Most of the specimens were much worn but occasionally one was seen evidently freshly emerged. Their path was on the whole from the southeast, probably their direction following the low lands as far as possible. Food was abundant, the apricot and orange trees averaging from 25 to 100 specimens at any hour of the day. In the air they were not as numerous as one sometimes sees A. plexippus in its similar migration in the east. They were, however, constant. At any given point in open space one could count from 50 to 300 a minute and the speed of flight averaged not far from 15 miles an hour. Moreover, these numbers hold good for at least 1,000 square miles and they were not less numerous at the 5.000 feet levels than in the low lands; besides, there was no diminution of numbers between sunrise and sunset. One can easily imagine that the total number of them living at one time in three counties is larger than the human population of the entire world.

R. P. DOW, Sierra Madre, California.

<sup>&</sup>lt;sup>2</sup>Hamilton, J. A.—Trans. Am. Ent. Soc., vol. XXII, 1895, p. 376.